



UNIVERSITY
OF MALAYA



FACULTY OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
WIG3004: VIRTUAL REALITY
SEMESTER 2, 2021 / 2022

LECTURER: MADAM NORNAZLITA BINTI HUSSIN

(GROUP ASSIGNMENT REPORT)

TITLE: MAGICAL GARDEN

FILE LINK (Please download the whole folder and click the .exe file to play):

https://drive.google.com/drive/folders/1wNCAMP6OaUPig_koIApxXE1Kyu_rOrPt?usp=sharing

WEB GAME LINK (Please be patient, graphic loading slower in web):

https://simmer.io/@vr_group5_asg/vr-group5-assignment

STUDENT NAME	MATRIC NUMBER
Nathaniel Kevin	S2137459/1
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Ooi Xiao Qi	17204423/1
Lim Hui Yee	17207677/1

1.0 INTRODUCTION

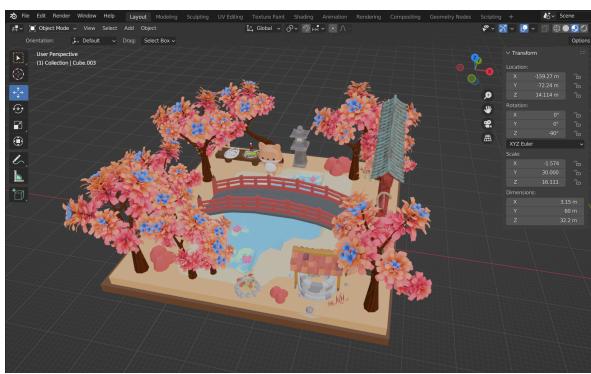
In this project, we are allowed to choose one virtual environment theme among four different themes. After discussion with group members, we decided to develop a magical garden. In order to develop this virtual world, we applied the knowledge we have learnt throughout this course. We also refer to tutorials from the internet, especially from Youtube, while developing this magical garden. Player is able to interact with the characters in this virtual magical garden. We have four scenes in this virtual magical garden, each having its unique style and a character in the scene. Every of our team members develop and design our own scene and character in blender before export and combine it in unity.

2.0 VIRTUAL ENVIRONMENT & CHARACTER DESIGN

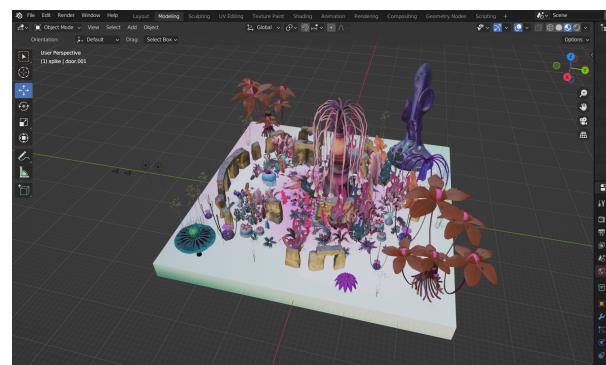
2.0.1 VIRTUAL ENVIRONMENT

Our virtual environment consists of four different scenes, a Japanese-style Garden, a Rabbit Home, a Mystic Swamp and a Magical Jungle.

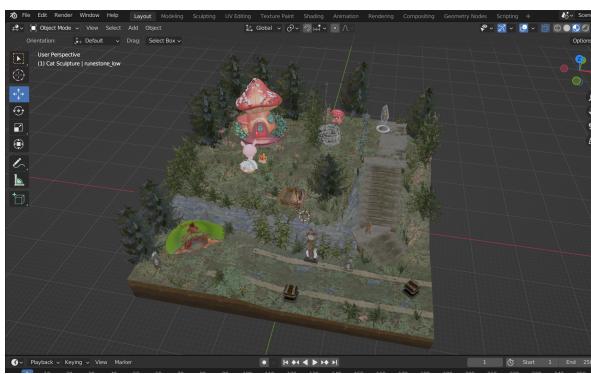
Japanese-style Garden



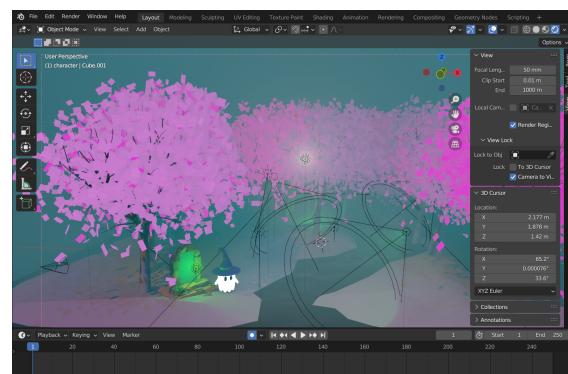
Mystic Swamp



Rabbit Home



Abandon Forest



2.0.2 CHARACTER DESIGN

Fox - Lucky



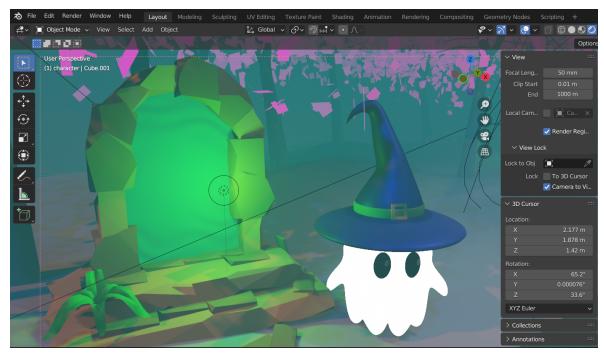
Alien - Genie Rabbit



Rabbit - Mrs Rabbit



Ghost - Ghosty



3.0 INTERACTIVITY

In this magical garden, we had set a first person view for users to walk, view and walk around the virtual environment. We also added the walking sound in the scene. Besides, users can talk to the characters in their respective scene by pressing F key. Users need to talk to characters before entering the next scene.



Figure 1.1 : Press F to talk with character



Figure 1.2 : Press Space to continue talk with character



Figure 1.3 : Press F to investigate (Entering next scene)

Camera orbits are set around the character. When the character moves, the camera will follow the character's movement. Movement of the mouse will control the rotation of the camera around its orbits, so players are able to move their mouse to view the scene from a different perspective. There are several hotkeys in this application. The hotkeys are summarized in the table below:

HotKey

HotKey	Function	HotKey	Function
Up/W	Move the character forward.	Left/A	Move the character to the left.
Down/S	Move the character backward.	Right/D	Move the character to the right.
Space	Continue communicating with NPC /Jump.	F	Communicate with the NPC/open door to next scene
Shift + WSAD	Move the character faster	Backspace	Quit the game.

4.0 GROUP MEMBERS RESPONSIBILITIES

Group Member	Responsibilities
Nathaniel Kevin Untoro	<ul style="list-style-type: none">● Develop and Design scene (Abandon Forest)● Develop and Design character (Ghosty)● Writing script for interaction with character (Ghosty)● Coding for moving, jumping and sound effect
Tan Xiu Li	<ul style="list-style-type: none">● Develop and Design scene (Japanese-style Garden)● Develop and Design character (Lucky)● Writing script for interaction with character (Lucky)● Coding for communication with Characters and Open door to next Scene
Ooi Xiao Qi	<ul style="list-style-type: none">● Develop and Design scene (Rabbit Home)● Develop and Design character (Ms Rabbit)● Writing script for interaction with character (Ms Rabbit)
Lim Hui Yee	<ul style="list-style-type: none">● Develop and Design scene (Mystic Swamp)● Develop and Design character (Genie Rabbit)● Writing script for interaction with character (Genie Rabbit)

5.0 CONCLUSION

Developing a virtual environment is complex and it takes time to complete it. Throughout the development of this project, we are exposed to the virtual world and we have a better understanding about virtual reality. We encountered some issues when developing this magical garden. But fortunately, we managed to find solutions and resolved all the issues we faced. In conclusion, we are pleased to have developed this magical garden successfully.